

REMARKS

No claims are herein amended. No claims have been cancelled. Claims 8-14 have been added. Claims 1-14 therefore are pending and presented for review. Favorable reconsideration and allowance are requested in light of the remarks which follow.

1. Rejections Based on Prior Art

Claims 1-7 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,551,022 to Stayner (the Stayner patent), in view of U.S. Patent No. 3,232,188 to Frohnauer (the Frohnauer patent).

a. Recapitulation of Invention¹

Briefly described, the invention relates to an undercarriage for a compacting device. In general, the compacting device includes lower mass with a compacting plate, an upper mass connected to the lower mass via a spring damping device, a vibration generator that loads the compacting plate, and an undercarriage attached to the lower mass. The undercarriage includes at least one roller element situated in rotatable fashion on an undercarriage axle for the transporting the compacting device. The undercarriage axle is stationary with respect to the device and is located such that, during use, the roller elements do not touch the soil. ("Stationary" in this

¹ This Section 1(a) is presented for background purposes so the Examiner may understand the state of the art and, in general terms, the applicant's contribution thereto. It is not intended to constitute a specific traversal of any particular rejection. That task instead is performed in Section 1(b) below.

regard means that the axis of the axle cannot pivot, slide, or otherwise move relative to the undercarriage. The axle may rotate). However, when the compacting device is placed in a transport position, the compacting plate does not touch the soil, but the roller element instead touch the soil and bear the weight of the compacting device.

Prior art plate compactors are devoid of stationary undercarriage axles with roller elements thereon. Instead, some prior art plate compactors provide, for example, undercarriages with pivoting mechanisms to move wheels from a rest position into a travel position. The recited invention provides an undercarriage configuration with a stationary axle which on the one hand has the advantageous design which enables a user to relatively easily transport the device, while on the other hand eliminating the need to manipulate the axle into a suitable transport position.

b. Traversal of Rejection

Applicants respectfully traverse the above referenced rejections and assert that the Examiner misinterpreted and misapplied the cited Frohnauer references. Neither the cited combination of the Stayner patent and Frohnauer patent, nor any other reference of record, alone or in combination, disclose each and every element of the novel independent claim.

Independent claim 1 recites a soil compacting device that includes an undercarriage having one or more roller elements situated in rotatable fashion on an undercarriage axle for the transport of the device, wherein the undercarriage axle is stationary in relation to the device.

The claim further recites that in a transport position, the compacting plate does not touch the soil, but the roller elements touch the soil and bear the weight of the device.

A combination of the Stayner patent and Frohnauer patent does not and cannot suggest an undercarriage assembly where **the undercarriage axle is stationary in relation to the device,** or a device that compactor that **in a transport position, the compacting plate does not touch the soil, but the roller elements touch the soil and bear the weight of the device.**

Applicants agree with the Examiner that the cited Stayner patent does not disclose an axle or rollers in any regard. However, Applicants respectfully disagree with the Examiner that the Frohnauer patent somehow suggests modifying Stayner to include an axle and one or more roller elements positioned as claimed.

Before discussing the specific defects in the Examiner's rejection, it should be noted that the tamping machine disclosed by Frohnauer is drastically different from that disclosed by Stayner and is technically defective, rendering the applicability of any teachings of Frohnauer to Stayner questionable, at best. Frohnauer describes a vibration plate without a division into upper and lower masses. The motor support is screwed directly onto the case construction. It should be noted at this time that the representations in Figures 7 to 10 of Frohnauer are physically incorrect. Assuming that, contrary to what is shown in the Figures, the eccentric weight were sufficiently large relative to the overall mass formed from the add-on structures and the motor connected fixedly thereto, the flight phase (Fig. 9) would then be the point at which the weight was at the bottom, not at the top as shown in Fig. 9. Due to the maintenance of the center of gravity of the overall system, the equipment mass must be at the top when the eccentric mass is at the bottom, and vice versa. This harmonic oscillation is disturbed only slightly by the impact and sinking into

the soil of the vibration foot. The depicted machine has either has an insufficient compacting effect (it does not jump, or does so only slightly), or the drive motor destroys itself in a short time. The geometry of the foot is such that stable movement behavior is not to be expected. The center of gravity is much too high, and the footprint Someone skilled in the art will recognize the essential flaws at once, and will regard this application as a piece of fantasy. Someone skilled in the art cannot glean *any* practical teaching from such fantasy-based drawings.

The machine disclosed in Frohnauer also departs from accepted design in failing to decouple the lower mass from the upper mass by springs or the like from the upper mass, thus protecting the motor from vibrations. The isolation of such sensitive parts as motors from the vibrating lower mass is absolutely necessary. Based on this experience, no one previously dared to attempt to fasten wheels to this lower mass, which vibrates ever so strongly.

Turning now to the substance of the rejection, Applicants disagree with the Examiner's assertion that the Frohnauer patent discloses "a pair of wheels (21), raised above and out of contact with the soil being compacted" (Office Action dated 10/11/2006, page 2, end of paragraph 1)." Structure 21 is not described, in any regards, in the text of the Frohnauer patent. Thus, since there is no written portrayal of structure 21, any interpretation of the structure is limited to the drawings. Merely because a structure has a round perimeter, such as that of structure 21, does not make it a suitable load bearing wheel or roller. There is no indication whatsoever that the element 21 alleged by the Examiner is a wheel capable of supporting the load of the machine during transport.

On page 3 of the office action, the Examiner states that:

“The provision of the wheels obviating the need for one or more people to lift and carry the machine to a work truck or the like. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention was made to provide the soil compactor of Stayner, with transport wheels, as taught by Frohnauer, in order to save effort and injury to the operator of the machine. See Frohnauer Col. 2.”

As stated above, Frohnauer is completely silent as to the construction, purpose, and operation of its element 21. The Examiner’s somewhat-lengthy discussion of the purported motivation to combine the cited references clearly constitutes nothing more than hindsight reconstruction of applicants’ own machine, gleaned from applicants’ disclosure. A rejection based on obviousness cannot be predicated on such an analysis.

Finally, the Examiner completely ignores an important limitation of claim 1 in his analysis. Specifically claim 1 requires that the undercarriage axle be *stationary* relative to the compacting device. No structure can be seen in Frohnauer for mounting the purported axle on Frohnauer’s frame. Assuming for the sake of argument that the structure 21 is, indeed, a wheel capable of supporting the weight of the tamping machine, one still cannot tell from Frohnauer’s disclosure whether the purported axle for that wheel is stationary, pivotable, slidable, or movable in some other manner entirely. As with the Examiner’s other conclusions, any conclusion that the axle is stationary would necessarily be gleaned from an improper hindsight reconstruction of applicants’ own machine.

Accordingly there is no motivation or suggestion, short of improper hindsight

reconstruction based on applicants' own disclosure, to interpret the Frohnauer patent as the Examiner proposes, or to combine the thus-interpreted Frohnauer patent with the Stayner patent and modify that combination, to arrive at the device recited in claim 1. Claim 1 is therefore relieved to be non-obvious over the side of prior art ending condition for allowance.

Nor is there any suggestion, short of improper hindsight reconstruction based on applicants' own disclosure, to combine the Stayner patent and Frohnauer patent to produce the devices recited in claim 2-7, respectively.

For instance, regarding claimed 2, the Examiner erroneously states that Frohnauer teaches that a change may be made from a compacting position to a transport position by tipping the machine about an axis that correspond to essentially of the wheel axis. A review of Frohnauer's admittedly fanciful and inconsistent drawings indicates that any tipping would appear to occur at the rear end of the plate 114, i.e., immediately above the reference numbered 114 in Figures 7-10. That tipping point is located well in front of the alleged axle of the element 21 alleged by the Examiner to correspond to the claimed wheel.

Referring to claim 5, without relying on applicants' disclosure, there is simply no motivation to provide a soil compacting device with roller elements, **wherein the roller elements have an intentional imbalance.** As discussed, e.g., on lines 11-16 of page at 5 of the application, providing imbalance 11 on the roller elements 9 helps to counteract wearing of the

roller element bearings, making it possible use roller bearings for supporting roller elements 9.
Neither such an imbalance nor the attendant benefits are remotely suggested by Frohnauer.

For the reasons stated above, the Stayner patent and Frohnauer patent, combined, do not render the invention of independent claim 1 obvious; nor do they individually, and the obviousness rejection should be withdrawn. The rejection of claims 2-7, each of which dependent directly or indirectly on claim 1, should likewise be withdrawn.

2. New Claims and Conclusions


New claims 8-14 are generally commensurate in scope with claims 1-7, respectively and are relieved to be a condition for allowance for least generally the same reasons discussed above in connection with claims 1-7.

It is believed that each of the Examiner's rejections have been addressed by argument, and that each of pending claims 1 – 7 is in condition for allowance. Such action is respectfully requested. The Examiner is strongly urged to contact Applicants' attorney by telephone with any remaining questions, if such telephone contact would help expedite allowance of the claims.

Response to Office Action dated October 6, 2005
U.S. Serial No.: 10/473,473; filed September 26, 2003
Inventor: Riedl
Art Unit: 3682
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Authorization is hereby given to deduct Deposit Account No. 50-1170 in the amount of \$450.00 for a two-month extension of time which applicant hereby requests for a large entity. Should the Examiner consider any other fees to be payable in conjunction with this or any future communication, the Director is authorized to direct payment of such fees, or credit any overpayment to Deposit Account No. 50-1170.

Respectfully submitted,



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